


[Home](#) » [Sortable Materials](#)









































































Material Properties









































































Click on the property name in the column header to sort the materials by that property.


















Click on a question mark for a definition of the property.

Need information on machining, annealing or fabricating? [Click Here](#)

Mechanical Properties		Thermal Properties		Electrical/Physical Properties							
Material	Image	Type	Density (g/cm³)	Tensile Strength (ASTM D638, psi)	Tensile Elongation (ASTM D638, %)	Tensile Modulus (ASTM D638, psi)	Tact. Impact strength (Iz ASTM D256, ft-lb/in)	Flexural strength (ASTM D790, psi)	Flexural modulus (ASTM D790, psi)	Compressive Strength, Yield (ASTM D695, psi)	Coefficient of Thermal Expansion (ASTM D695, in/in)
<input type="checkbox"/> ABS		Unfilled	6,100	20	310,000	7.70	10,500	340,000	2,900		0.35
<input type="checkbox"/> ABS Conductive		Reinforced	17,250	2.50	350,000	1.00	23,500	1,450,000			
<input type="checkbox"/> ABS FR		Reinforced	5,500	20	320,000	4.00	9,500	330,000	7,650		
<input type="checkbox"/> ABS SD		Reinforced	5,000	13		6.00	8,000	260,000			
<input type="checkbox"/> Acetal Copolymer		Unfilled	8,800	25	380,000	1.00	11,000	360,000	4,500	290,000	0.21
<input type="checkbox"/> Acetal Copolymer SD		Reinforced	6,600	45		1.90	7,000	210,000			0.18
<input type="checkbox"/> Acrylic (PMMA) Extruded		Unfilled	10,100	5.10	431,000	0.28	14,600	486,000	17,000		
<input type="checkbox"/> Acrylic Cast		Unfilled	8,038	2.70	425,000	0.45	12,000	457,000	16,000		
<input type="checkbox"/> Ardel® Polyarylate		Unfilled	10,000	50	300,000	3.80	11,000	310,000	12,180		
<input type="checkbox"/> Celazole® PBI		Unfilled	20,000	3	850,000	0.50	32,000	950,000	50,000	900,000	0.24
<input type="checkbox"/> CPVC		Unfilled	7,300	35	450,000	9.00	14,300	361,000	10,100	196,000	
<input type="checkbox"/> Delrin® 100AF		Reinforced	8,000	15	435,000	0.70	12,000	445,000	16,000	350,000	0.19
<input type="checkbox"/> Delrin® 150		Unfilled	9,000	25	350,000	1.50	11,500	420,000	5,200	450,000	0.20
<input type="checkbox"/> Delrin® 570		Reinforced	8,500	12	870,000	2.85	10,700	725,000			
<input type="checkbox"/> ETFE		Unfilled	6,250	225		No Break	4,640	145,000	2,470		0.23
<input type="checkbox"/> FEP		Unfilled	3,400	325	55,000	No Break		85,000	2,100		0.20
<input type="checkbox"/> Halar® ECTFE		Unfilled	7,800	250	240,000	No Break	6,800	245,000			0.19
<input type="checkbox"/> HDPE		Unfilled	4,423	>1,350	225,000	1.30		167,000			0.28
<input type="checkbox"/> HPV 13		Reinforced	12,500	17.50	858,000	0.70	10,000	350,000	10,500	350,000	0.12
<input type="checkbox"/> Hydrel® PEI-7		Reinforced	9,400	4	400,000	1.40	16,250	424,000	16,200		
<input type="checkbox"/> Hydex® 202		Unfilled	9,000	80	340,000	10.00	12,000	280,000			0.22
<input type="checkbox"/> Hydex® 301		Unfilled	10,000	140	310,000	2.40	14,000	340,000			0.21

Hydrex® 4101			Unfilled	9,400	50	425,000	0.70	12,000	420,000	0.25
Hydrex® 4101L			Reinforced	7,200	40	380,000	0.70		390,000	0.11
Hydriar® Z			Reinforced	16,000	4	1,300,000	2.70	23,000	900,000	19,300
Hytrell® 5556			Reinforced	6,000	500	26,000			26,000	
Imidex®			Unfilled	17,100	110	442,780			548,000	
Laminate G-10/FR-4 Glass Epoxy			Reinforced	45,000			14.00	70,000		55,000
Laminate G-11 Glass Epoxy			Reinforced	43,000				80,000	3,000,000	63,000
Laminate G-7 Glass Silicone			Reinforced	18,000				25,000		45,000
Laminate G-9 Glass Melamine			Reinforced	44,000			12.50	61,000	2,000,000	70,000
LDPE			Unfilled	1,943	515	41,615	No Break	1,175	28,565	0.60
Macor® Ceramic			Unfilled			9,700,000		13,600		50,000
Meldin® 7001			Unfilled	12,500	8			15,800	4,600,000	3,800,000
Meldin® 7003			Reinforced	9,200	5.50			13,000	4,600,000	3,600,000
Meldin® 7021			Reinforced	9,500	4.70			15,800	5,300,000	4,500,000
Meldin® 7022			Reinforced	8,000	3			13,000	7,700,000	4,800,000
Meldin® 7211			Reinforced	7,500	4			11,800	5,000,000	3,500,000
Noryl® 30% GF			Reinforced	15,500	5	1,000,000	2.00	22,000	830,000	0.27
Noryl® PPO			Unfilled	9,200	25	350,000	3.50	14,400	370,000	0.39
Nylon 6 Cast			Unfilled	12,500	25	350,000	0.60	12,500	350,000	0.26
Nylon 6 Cast Bearing Grade			Reinforced	11,000	20	350,000	0.70	12,500		
Nylon 6 Cast Graphite Filled			Reinforced	11,000	20	350,000	0.60	12,500	350,000	
Nylon 6 Cast MD Filled			Reinforced	11,000	20	350,000	0.60	12,500	350,000	
Nylon 6 Cast MD/Oil Filled			Reinforced	8,500	40		1.75	12,800	400,000	0.14
Nylon 6 Cast Oil Filled			Reinforced	8,800	25	350,000	1.20	12,500	325,000	
Nylon 6/12 Extruded			Unfilled	8,000	20	300,000	0.90		275,000	2,400
Nylon 6/6 30% GF			Reinforced	12,000	10	400,000	1.00	18,500	550,000	0.31
Nylon 6/6 Extruded			Unfilled	10,000	25	350,000	1.10	15,500	440,000	5,000
Nylon 6/6 Heat Stabilized			Reinforced	10,000	25	350,000	1.20		440,000	
Nylon 6/6 MD Filled			Reinforced	11,000	15	450,000	2.10	17,500	450,000	
Nylon 6/6 Super Tough			Reinforced	7,200	60		17.00	9,800	245,000	0.28
PCTFE			Unfilled	5,000	150					
PEEK			Unfilled	14,000	50	522,100	1.55	27,700	530,000	17,100
PEEK 30% CR			Reinforced	30,200	1.30	1,885,400	1.60	46,100	1,885,400	34,800
PEEK 30% GR			Reinforced	22,800	2.20	1,406,800	1.80	33,800	1,495,200	31,200
PEEK Bearing Grade			Reinforced	17,300	2.50		3.25	30,000	1,400,000	22,000
PET			Unfilled	11,500	15	400,000	0.60	15,800	411,000	14,900

PETG			Unfilled	7,700	50	320,000	1.70	11,200	310,000					
PFA			Unfilled	3,600	300	290,000	No Break		85,000				0.21	
Phenolic C Canvas			Unfilled	12,000			1.95	18,000	1,600,000	34,000				
Phenolic CE Canvas			Reinforced	11,000			1.70	17,500	1,600,000	34,000				
Phenolic L Linen			Unfilled	14,000			1.70	24,500	1,700,000	38,000				
Phenolic LE Linen			Reinforced	13,000			1.35	22,000	1,600,000	36,000				
Phenolic N-1 Nylon			Reinforced	8,000				14,000	700,000	25,000				
Phenolic X Paper			Reinforced	20,000			0.82	34,000	1,900,000	35,000				
Phenolic XX Paper			Unfilled	13,500			0.50	22,000		25,000				
Phenolic XXX Paper			Unfilled	14,000				20,000	1,300,000	35,000				
Polycarbonate			Unfilled	9,500	110	345,000	14.00	13,500	345,000	12,500	345,000		0.38	
Polycarbonate 20% GF			Reinforced	16,000	5	860,000	2.06	19,000	798,000	16,000			0.22	
Polycarbonate 40% GF			Reinforced	23,000	3	1,680,000	2.50	27,000	1,400,000	21,000				
Polypropylene Copolymer			Unfilled	4,800	650	152,000	7.80	3,750	184,000					
Polypropylene FR			Unfilled	3,250	600		0.15		145,000					
Polypropylene Homopolymer			Unfilled	5,150	400	240,000	1.20	7,250	212,500	5,750	225,000		0.26	
Polystyrene High Impact			Unfilled	3,500	52	239,000	2.10	6,200	277,000					
Polysulfone			Unfilled	10,200	75	360,000	1.30	15,400	390,000	13,900	375,000		0.37	
PPS			Unfilled	8,700	4	480,000	0.50	17,400	435,000	13,700	435,000		0.24	
PTFE			Unfilled	4,000	400	66,700	3.50		72,000	1,000			0.10	
PTFE 25% CF			Reinforced	1,950	115					1,600				
PTFE 25% GF			Reinforced	1,500	100					1,400	97,200			
PVC			Unfilled	7,500	35	411,000	0.80	12,800	481,000	9,500	375,000		0.30	
PVDF			Unfilled	7,800	35	350,000	3.00	10,750	310,000	11,600			0.24	
Radel® A PES			Unfilled	12,000	75	385,000	1.60	16,100	420,000	14,500	388,000			
Radel® R PPSU			Unfilled	10,100	90	340,000	13.00	13,200	350,000	14,350	251,000			
Radel® R5500			Unfilled	10,100	90	340,000	10.00	13,200	350,000	14,350	251,000			
Rulon® AR			Reinforced	2,000	175		6.00						0.20	
Rulon® J			Reinforced	2,000	180				180,000	1,000			0.16	
Rulon® LR			Reinforced	2,000	135		6.00						0.20	
Ryton® PPS 40% GF			Reinforced	7,842	1		0.90	26,650						
Ryton® PPS Bearing Grade			Unfilled	5,100	1.50		1.60	7,600						
Semitron® ESd 225			Reinforced	5,400	15	200,000	1.50	7,300	220,000	8,000	175,000		0.29	
Semitron® ESd 410C			Reinforced	9,000	2	850,000	0.80	12,000	850,000	19,500	600,000		0.18	
Semitron® ESd 420			Reinforced	9,500	2	550,000	1.00	14,500	525,000	16,500	350,000		0.20	
Semitron® ESd 500HR			Reinforced	1,500	50	250,000	1.00	2,200	350,000	3,800	225,000		0.10	
Semitron® ESd 520HR			Reinforced	12,000	3	800,000	0.80	20,000	850,000	30,000	600,000		0.24	

 Tecator® TI5013		Unfilled	21,000	15		2.30	33,000	711,000	30,000				
 Tecator® TI5031		Unfilled	19,000	10		2.00	23,000	870,000					
 Tecator® XP142T		Reinforced	17,000	2		0.75	21,000	821,000					
 TPX® Polymethylpentene		Unfilled	1,400	33	270,000	0.95	4,000	160,000	3,340				
 UHMW-PE		Unfilled	5,800	200	120,000	No Break		110,000	2,400	75,000	0.12		
 UHMW-PE Anti-Static		Reinforced	4,000	140	156,900	No Break		100,000			0.12		
 UHMW-PE Oil Filled		Reinforced	6,527	280	76,000	No Break		63,818			0.13		
 Ultem®		Unfilled	15,200	60	430,000	1.00	22,000	480,000	21,900	480,000	0.17		
 Ultem® 2300		Reinforced	24,500	13	1,300,000	1.60	33,000	1,300,000	30,700	938,000			

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.

Prices listed on this website are valid for internet orders only.

Need to be set up with credit? [Click here for application.](#)

7600 Anagram Drive Eden Prairie, MN 55344 | Phone: 952-934-2303 | Toll Free: 800-776-7769 | Fax: 952-934-2314 | [Site Map](#)